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Images in Clinical Medicine

Cement pulmonary embolism—A rare cause of embolism

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Percutaneous vertebroplasty with injection of polymethyl methacrylate cement is an effective method for the treatment of symptomatic vertebral lesions including hemangioma [1], malignancy-related pathologic fractures, and osteoporotic compression fractures of the spine [2,3]. Cement leakage into adjacent structures and the venous system are potential complications after percutaneous vertebroplasty.

A 60-year-old woman without systemic disease visited the emergency department because of vomiting and chest pain for 2 days. Her medical history revealed osteoporosis with multiple compression fractures of the lumbar spine treated 6 months previously with percutaneous vertebroplasty. Chest radiography showed linear-branching opacities at the bilateral pulmonary trunks (Fig. 1). Computed tomography of the chest confirmed the diagnosis (Fig. 2). She was discharged after 5 days of treatment with supplemental oxygen and anticoagulation therapy (heparin followed by coumarin).

A pulmonary cement embolism is rare but can be fatal if not recognized [3]. Common clinical signs and symptoms of cement embolisms include tachypnea, tachycardia, cyanosis, chest pain, hemoptysis, dizziness, and diaphoresis. Symptomatic peripheral embolisms or central embolisms can be treated with initial intravenous heparinization and coumarin therapy for 6 months [4]. Asymptomatic patients, however, require no treatment except for close outpatient follow-up. Surgical embolectomy is reserved for extreme cases of central embolisms [4].

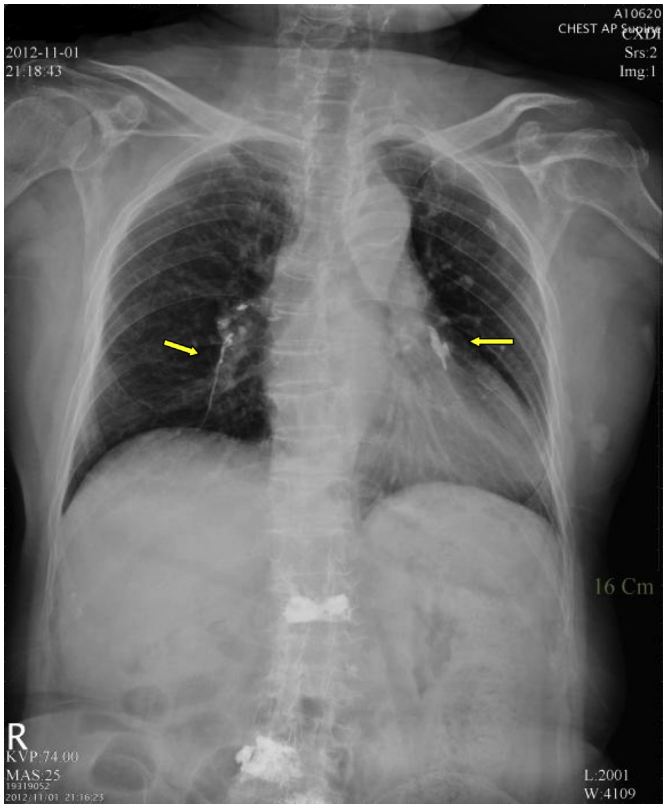

Fig. 1. Chest radiograph showing linear-branching opacities in bilateral pulmonary arteries (arrows).

Conflicts of interest: none.

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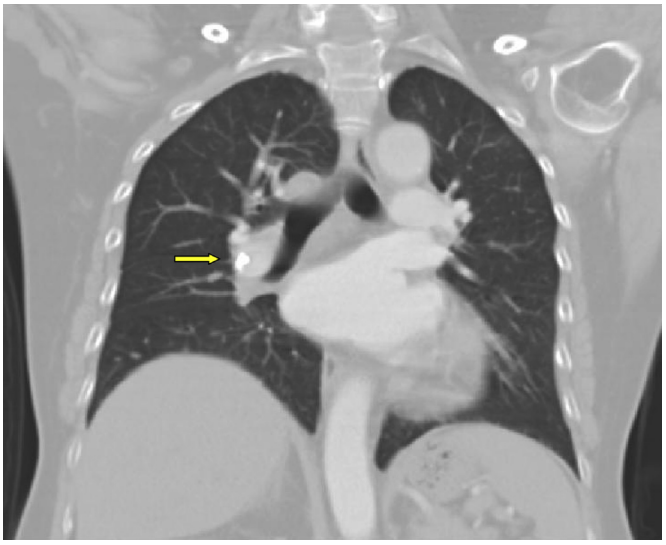

Fig. 2. Computed tomography of the chest showing a cement pulmonary embolism (arrow).

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